

Good places to come home to



Hastoe Housing Association

Ulrike Maccariello – Senior Development Officer

- Rural Housing Specialist
- Approximately 100 new homes to EcoHomes Excellent standard in 2008



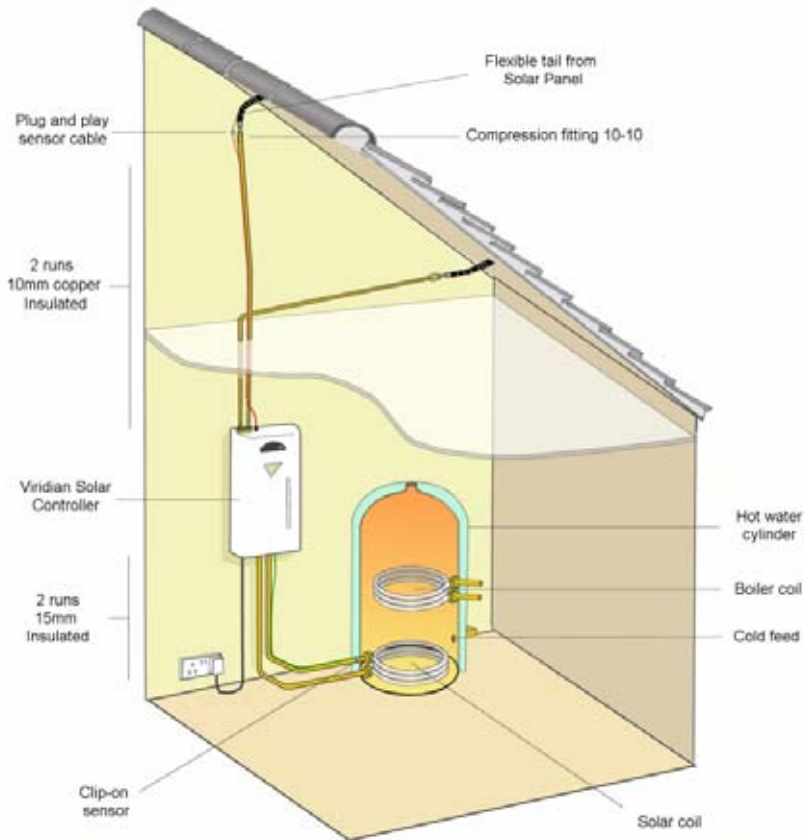
STEEPLE BUMPSTEAD, BRAINTREE



- Pilot scheme for “affordable” solar hot water panels
- 3 houses were deemed suitable with south/west facing roofs
- 1 year long study by Viridian Solar, BBA and BRE

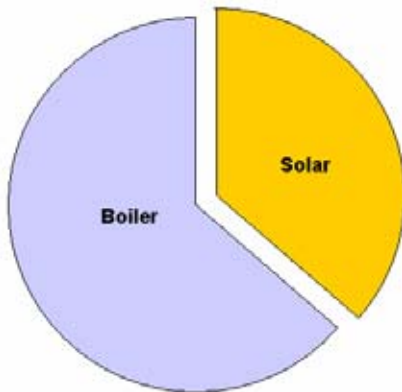
IMPACT ON BUILD PROGRAMME

- Simple Installation
- Quick Fit
- Approx. cost £1,200
- Lessons Learnt



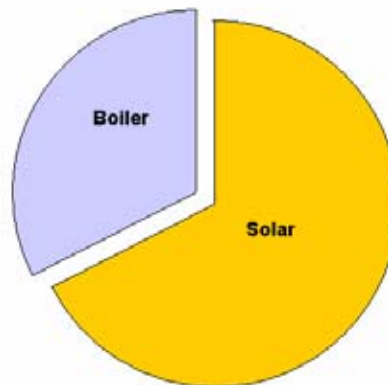
PROPORTION FROM SOLAR ENERGY AND BOILER DURING ONE YEAR

A



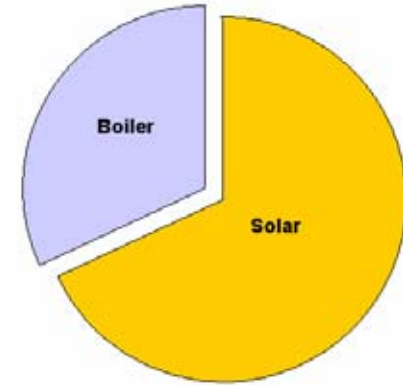
36%

B



68%

C



68%

MEASURED SOLAR ENERGY CHARGED TO THE HOT WATER CYLINDER DURING ONE YEAR

A



B



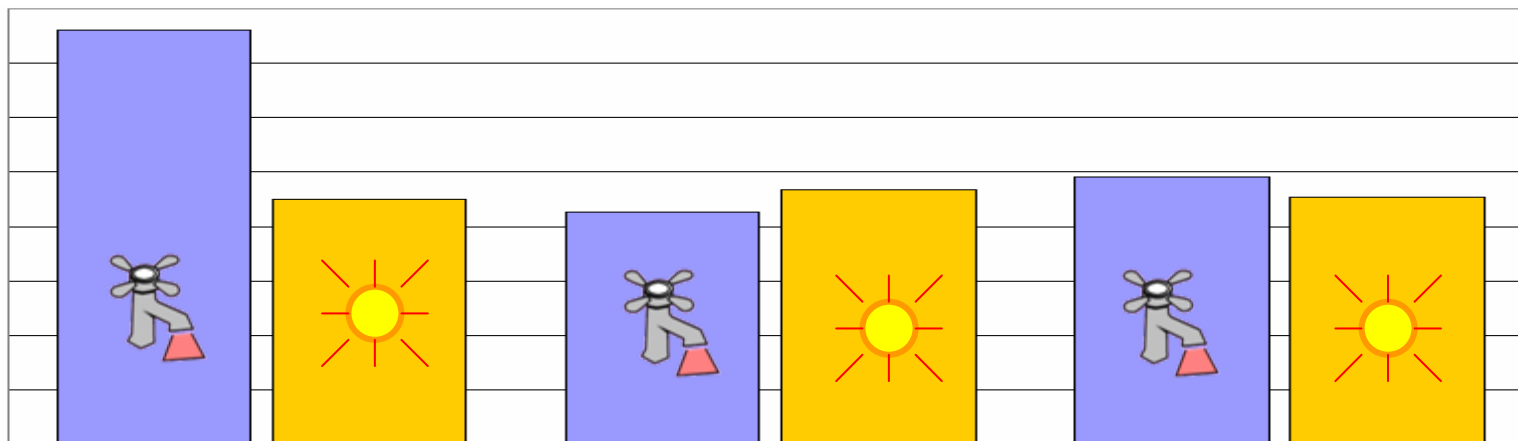
C



1,600 kWh

1,000

0



HOW MUCH ENERGY CAN REAL HOUSES SAVE?

- Summer 2007
- Free to our tenants
- Up to 70% supply of water heated with solar
- Energy saving approximately 950kWh for all three dwellings during one year



FELTWELL KING'S LYNN & WEST NORFOLK

**Upgrade from an
EcoHomes**

**Very Good Design
to EcoHomes
Excellent in a
Village without Gas**

**Scheme Completion
19 March 2008**



HOW DID WE DO IT?

- Ground Source Heat Pumps
- Increased U-values
- White Goods
- Larger sheds
- Insulation Materials
- Reduction of Rainwater run-off
- Timber from Managed Sources
- Recycling
- A-rated Materials
- Water Consumption
- Sound Insulation

GROUND SOURCE HEAT PUMPS

- 2 x 42 m deep boreholes
- Similar technique to refrigerator
- Temperature feeds into the central heating radiators and domestic hot water tank



HOW MUCH DID IT COST?

• Original Contract Sum	£1,118,558
• Estimated Uplift to Excellent	£175,000
• Actual Cost of Uplift	£200,000
• Uplift Cost per unit	£16,666
• Extra over cost for GSHP	£64,000
• Increased U-values	£26,000
• Reduction of Surface Water Run Off	£31,000
• Rainwater Re-cycling	£46,500
• A-rated Materials	£13,000

WHERE DID THE EXTRA COST COME FROM?

- Ground Source Heat Pump Package
- Extra margin for U-values
- Rainwater Harvesting Control Panel
- Soakaways
- Internal Materials

WHAT LESSONS DID WE LEARN?

- Design it IN at an Early Stage
- Cool Radiators!
- Easy Points
- Not so Easy Points



